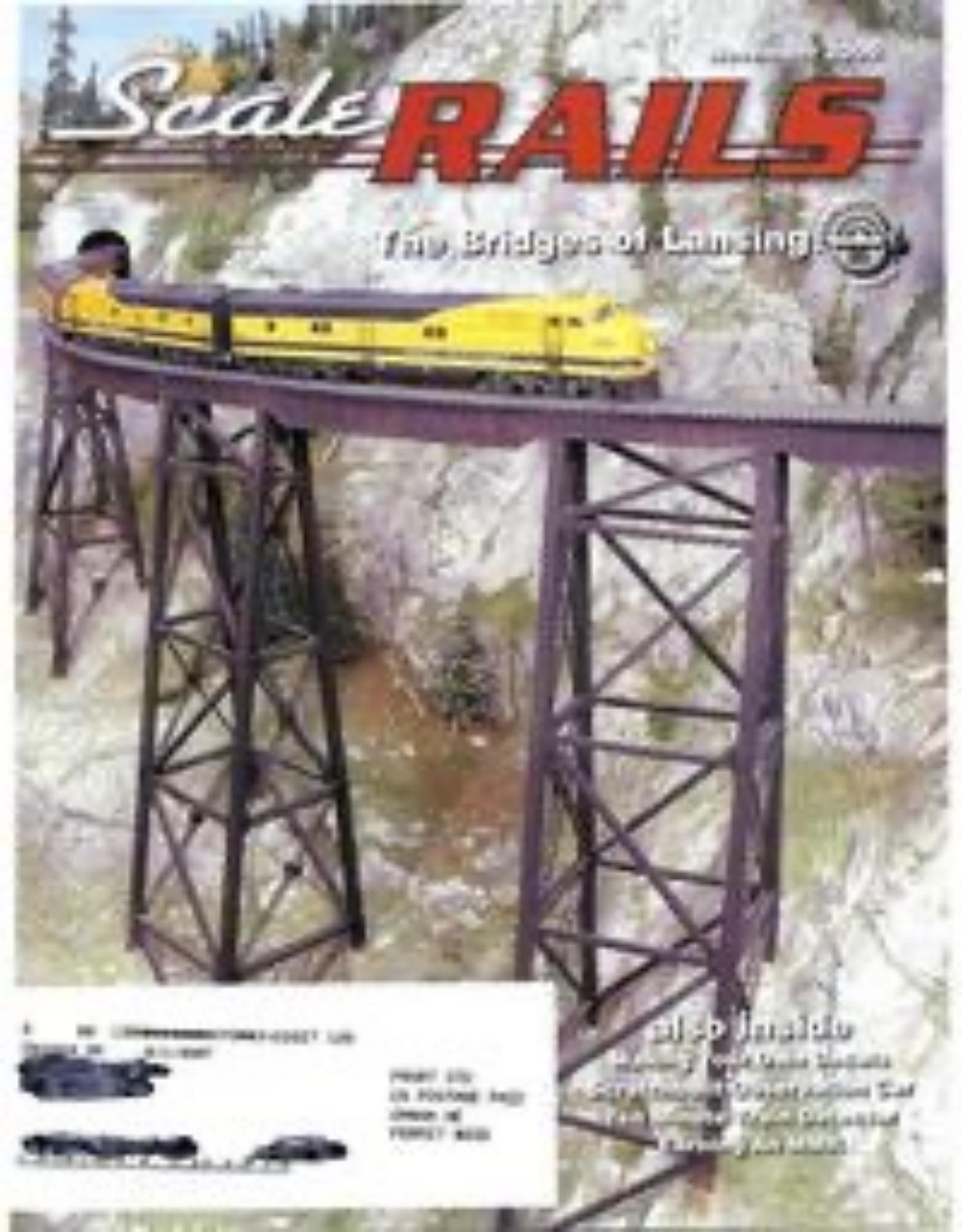
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Model Railroad Month

# President's Car

NMRA President Mike Brandt

As some of you may or may not know, November is Model Railroad Month in the U.S. All over the country, model railroad clubs, NMRA divisions and regions, and other model railroad-related groups are preparing for train shows, holiday displays, fundraisers, and other events that will throw our doors wide open to the countless millions of non-hobbyist railfans of the area.

We all know that the general public has for many years associated model trains with Christmastime. I have read that this juxtaposition is the result of a marketing campaign conceived and executed many years ago by the Lionel Corporation and its redoubtable godfather Lionel Cowen.

Although Mr. Cowen and his original Lionel Corporation passed away long ago in the 1960s, the relationship between the hobbyist and trains is strong even today. Since I brought "Model Railroad Month" to prominence for the first time, I found over 500 listings pertaining to events sponsored by clubs, divisions, and regions around the country.

## The sharp end of the stick

My conversations and letters often mentioned that while the national NMRA is the spine that holds things together, most of the hard work of the association occurs at the local level. Volunteers in the club, division, and region level are primarily the ones who give the hobby a face and a personality. They're the ones who are out there on the front lines, on the sharp end of the stick, where the rubber meets the road. It is these volunteers, conscientious, optimistic, and helpful that make friends for the hobby and for the NMRA.

Given just a short while, we didn't have to work so hard to introduce model railroading to the public. Most times were extraordinary. People took chances to travel and see relatives. Their express packages were delivered by train. The hobby store is never over the depot. Nowadays, the railroads seem to be happiest when we and items stay in transit. If there are any trains at all, the public sees locomotives and strange markings such as "UTLX" or "BNSF," instead of proud names such as "New York Central" or "Southern Pacific."

The compromises by brave men (ladies were in a minority in the old days) are: The Internet, eBay, NTX, and video games did not exist. A Lionel catalog from a year considered high tech. Across vested of multiple electricians, one hobby, minds experienced, independent, collectors ambassadors never done even.

(text continued on page 5)

Acknowledgments: [redacted]

Classic RAILS
Official Publication of the National Model Railroad Association

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### Virginia & Western No. 430

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# Observation Car

## Season Opener

Since the snow will be falling, and I will be hunkering down for another long winter of model railroading, I have been planning for a build this winter of an expansion of these wing coverings at the workbench. I love this time of year – prior to the responsibility of planning the layout and to the plans and those events coming upon with my Scouts and Cubs. Besides, the snow would of Thanksgiving and Christmas. The blowing wizard of the upbringing a glorious seasonal view of plans on this freshly finished model. The sounds and silence of our holiday being back kind memories of my childhood. My father and I used to down a bottle (glass) for which makes us I carefully wore about creating my winter complex. I received a game that about cars and generation from everything him. My is a very craftsman.

My running roadbuilding years this year will be different in one major way: I will be documenting most of my projects for eventual publication in a few days. I'm building models, as who can take their notes and to record the process – and my discipline – on the project management. This recording methodology is not unlike to handle when trying to repair an exhibit problem at a busy show. Having an article to refer to is a source of great satisfaction. Knowing that I'm dealing what I have said where when on a recording of my own, for that day and age, all I refer to a notebook or record each day to month, and my many Classic 1000 to organize each accessory, and the recipes to create an object is readily available. The cost is minimal – just a little time and value. I've already space for exciting materials. So here, with a good job, it's possible to sell the article to a magazine. This is, of course, one way to fund additional tool and parts for future model building.

Many of you are thinking "I'm not a good writer." Many enthusiasts and frequently published modelers share a challenge not to the model railroad writing world. They are not "good writers." That is where the editor comes in. We take your words and decisions and rewrite them until they flow naturally. So begin, imagine yourself explaining what you are doing to someone who doesn't model railroad. Answer questions as if you are doing interviews. In no time you'll have a good story.

So what are you waiting for? I guess all of you have anticipated that your issue of your favorite magazine is not functioning methods of the building, painting, and scratch using. Share your skills with the world. Photograph and write about your hobby – today.

(text continued from page 1)

## Who is our customer?

In July I heard a presentation by John Grech, president of Model Trains Today, to the Model Manufacturers Association at the NMRA Convention in Philadelphia. In his presentation, John pointed out that while most of us think that young people are the most likely buyers of new model railroaders, his experience shows that most of our new hobbyists are coming from the adult world. New railroads and expansions are the ones with the most fun scenery and the inclusion of railroads as a major influence on their lives. John feels that in the future the bulk of our recruits will come from this time-constrained sector, while a smaller number will come from younger groups. He suggests that we should direct a major part of our efforts toward recruiting men and the lady who comes to our club, but their partners and grandparents as well.

Since the fading of railroads from the public eye until the closing of so many hobby shops around the country, we have had less of the main street from the general public that traditionally have supported us in years. But this summer, our participation in and sponsorship of Train-tastic Railroad Models events have become more and more vital to the continued success of our hobby. We need to make sure that the trainers we've drawn up in these functions have a chance to invest what is given almost another railroading and we need to invite them to get involved.

## "Do you like trains?"

Over the years I have had the privilege to work with many train enthusiasts and promotional campaigns on events for the hobby and the NMRA. Foremost among them to my memory is Jack Wolf, a Pacific Coast Region member and the former NMRA national membership chair. We explored promotion and contact ways organized to work only one with Jack on the membership levels at the National Train Show in Indy, enjoyed the days I spent at the conventions over the 5 yrs as a result Jack work, telling the NMRA and model railroading to those who happened by.

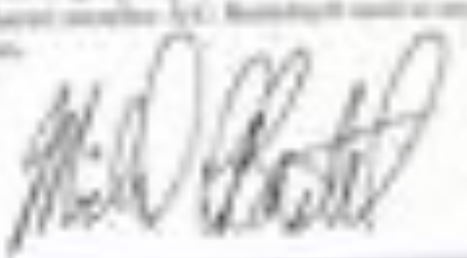
"Hi!" Jack would say to a prospect, "Do you like trains?" Since the person was visiting a train show, the answer was almost always yes. "Where are you from?" the conversation would start as Jack would tell you about the NMRA," Jack would say.

Jack would allow the conversation to go where the prospective member wanted to take it, but invariably he would bring it back to the points at hand. "Would you like to get more information on model railroading? Would you like to join a group that shares your interests in trains and holds train-oriented meetings and events in your area?" Sometimes the prospect would say no, but unfortunately often he would say yes! He had a couple Jack's collaborators and sponsors in the hobby and the NMRA.

## Model railroading is fun

A couple of months ago, I worked all of us to find a way to share our love of hobby and others and to find ways to make them feel welcome at the NMRA. The best opportunity to do this is coming up this month, and we have already found our target audience. We won't have to go that far. They'll be coming to see us. We don't have to be super salesmen, we just have to be able to look up a manager and say, "Do you like trains? I do, too. Let me tell you about the NMRA."

If your club declines, or misses a few of the many building special events during Model Railroad Month, why not volunteer to help recruit? You'll enjoy the experience, you'll meet a lot of nice people, and you'll be helping to grow both the NMRA and the hobby. Model railroading is fun, so NMRA deserves membership. It's illustrated could in any of a more basic fun when we can share it with others.



# Mail Car

Reader Feedback

I recently read the article "Low-Cost, Low-Maintenance Layout Lighting" in the September 2006 issue of *Model Rail*. I am an Electrical Engineer with over 20 years experience and work with CCFL lighting extensively in LED component fabrication at Photon Systems. I have used cove lights for my own lighting systems and was pleased to see someone else use them creatively as well. I've used the track lights from an IKEA furniture store (model LED). While I would not select these components because of a few issues of safety that were disappointed, possibly through ignorance or possibly through inadvertency, of the overall design of LED.

CCFL inverters use extremely high voltages, as was mentioned in the article, several times (5000+). For photographic of the inverter shown there needed repair, or an hour passed current, feasible high voltage applications should be accompanied by an explosion. Ideally the inverter and bulb assemblies should be contained in an insulating case. I doubt this principle was followed and could lead to electrical shock. As a maintenance the inverter should be placed in a box, and the wires connected by an outside plastic bulb or have double tubing. Another issue that the article cover is the inverter from the wire that holds the bulbs. I refer the circumference should that may be necessary as a preference was very important safety precaution. I as generally a ground and shield for the bulbs is should be grounded, and I provide the minimum plastic or support to prevent the breaking of the bulb.

*Name withheld, Electrical Engineer, Advertisement*

**In Response:**

Thank you for providing important safety information.

We have received a report on track work in your basement of 5-mil Kapton and 3-mil Mylar, undertaken by [illegible] that under the article title "Wiring 4 and Your Car". The findings as concluded in the "Your suggest that some of the tracks measured, including one area, under the pass or [illegible] standards.

Flame findings, in our opinion, are not correct but equally it is not possible to say to what those products do not [illegible]. Assuming the number I used 5 seconds per three lines and Code 80 range, we would like to assure you that we have worked closely to pass 80-3 standards, as opposed to [illegible] in July 2006. We quote dimensions in [illegible]:

0: Track gauge. Recommended measure 0.033 inches

1: Check gauge. Recommended measure 0.033 inches, which is precisely correct as per your [illegible] check.

2: Guard rail gauge. Recommended measure 0.033 inches

3: Flangeway clearance. Recommended measure 0.040–0.070 inches

4: Flange depth, clearance. Recommended measure 0.033 inches

5: Point gauge. Recommended measure 0.033 inches

Perhaps you would be [illegible] as other persons, could measure of ours you would be your research to your short line have a misunderstanding on the subject.

What we would like to assure you is that, in our opinion, our Code 80 range of [illegible] turnouts will have your questions and to assist to have to suggest, and if you could make comment please [illegible] in the next issue of *Model Rail* and NMRA should as that your modification be correctly addressed.

Thank you in advance for your consideration and we look forward to having [illegible] soon.

Yours sincerely,

[illegible]

[illegible]

[illegible]

[illegible]

**In Response:**

My measurements were made on the following turnouts: #2 manufactured, Streamline, Code 70, #4 manufactured, Streamline, Code 70, and #6 Right-hand Electrical, Streamline, Code 83 [illegible]. The measurements were made on turnouts in the local hobby shop. Knowing the dirty environment applied to the [illegible] measurements were summarized in Table 1 of the article in the September 2006 *Model Rail* to be reasonable for some. The measurements of the server Code #2 turnouts were reexamined on a different manufacturer than was previously measured and found to be: 1: Track Gauge: [illegible] to .033", 2: Check Gauge: [illegible], 3: Guard Rail: [illegible], 4: Flange Clearance: [illegible], 5: Flange Height: [illegible] and 6: Point Gauge: [illegible].

I consider the key measurements to be 1: Check Gauge, which was measured to be .0600" and .0603" for these Model's manufacturer. Please notice the .0600" dimension should not be considered for target dimension with a tolerance of, say, +/- .0002" as some other tolerance. A 1: of .0603" should be considered for turnover dimension. A target dimension of .0600" would allow the manufacturing Tolerance and still be within the NMRA specifications. In fact, the #2 Track Gauge dimensions could be .0610" or higher and still allow the other critical measurements #2, 4, 5 to be in tolerance.

There is a real [illegible] for [illegible] the Guard Rails and the use of the Check Rail [illegible] .043" or more on your turnout [illegible]. If the Guard Rail is moved out toward the Check Rail by .0007" to .0008" to increase the Check Gauge, as mentioned in my October 2006 *Model Rail* article, this would not cause the [illegible] of derailment. Guard Rail to go out of specification and [illegible] wheel and the [illegible] of maintenance the Guard Rail and Check Rail for the short [illegible] under all [illegible] loading.

Thank you for asking the team to contact us about your concern. It is [illegible] to corresponding your [illegible] and answering questions that you are concerned about getting it right and making the best turnout for the hobby [illegible] appreciated.

*Name A. [illegible], NMRA*

*Advisor, [illegible] Team*

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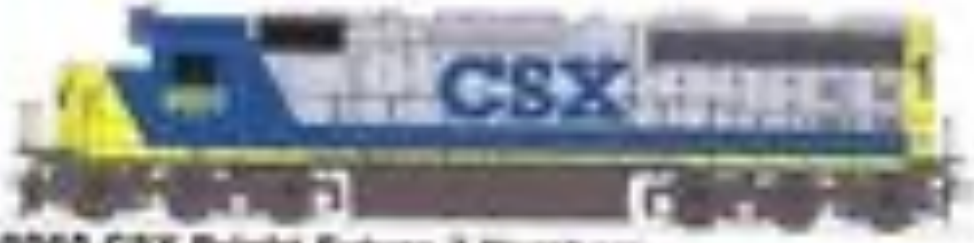


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# Making Decals

Creating your own decals using your computer and laser printer

www.shorpy.com/node/2 by Stephen M. Priest, NMRA

Has this ever happened to you? Your entire fleet of giant freight cars needs decals, but the ones commercially available are four dozen numbers. Furthermore, those darn customers won't contact you even to mention the great job railroad personnel did putting on that set of heavyweights you're trying to model. Or perhaps you are modeling somewhere NOW and have custom needs to fill, and decals simply do not exist. If you have a computer, flatbed scanner, and access to a laser printer, you may be in luck. If the car number isn't a colorful lettering job you can create the art yourself.

## GETTING TO WORK

The process is simple and straightforward. If you have the right tools to do the job. First, you will need a computer (duh), and a good software package. I have that. Microsoft Paint in the main and go get a copy of Adobe Illustrator or CorelDRAW. Ideally, you need to be looking for a Postscript-enabled program. Postscript will create smooth curves of the "jaggies," even on circles. These programs allow you to infinitely shrink or enlarge shapes without distorting the shape. (Adobe Illustrator, InDesign and Postscript refers us to create this publication.)

The next step is to create the artwork you need for the project. Most Craftsmen have an excellent website (website) that matches railroad track, locomotive and railroad equipment materials, and a lot and you to the creation of your art. We can be found at: http://www.railfans.com/. Point and click (generally in a package). The basic work will relate a bit in PC; however, you should quickly

which platforms at the time of purchase to avoid any problems.

Working from a scanned broadside passenger image will allow you to have reference points for the placement and relative size of the objects you wish to recreate on your decal. Numerous cool photographs (railroad, digital photography, scanned drawings, books, or magazine articles). Use to your print painting with blank paper, creating a test card before it on the car side. Any adjustments you can be made within your program. Illustrator allows you to manually resize the art to your needs without degradation of the image. A powerful feature of the program is layers. If creating artwork on layers, you can import numbers, photos you the ability to print single layers or presenting single colors or any combination of layers as desired. This is important when you have lighter-colored lettering or objects that occur in the general vicinity of a dark-colored background. You can print the dark and lighter-colored objects on separate passes.

until no paint odor could be detected from the surface of the car. The car is then allowed to cool and the bagging is unwrapped.

## READERSHIP

Remembering the car is weightless work. The only time to put attention to it is the recently applied paint. Take care not to chip or scrape the paint from the surface, which is particularly easy to do on brass models. The faces of the wheelsets were darkened using a mixture of Floquil Rail Brown and Graphite. Prototype wheelsets have a metallic sheen to them, and Floquil graphite mimics that quite well. Brake Rod Levers were added to the car. These were assembled in two pieces each and the grab irons were then added to the car. The plastic draft gear mounted the metal Kadee couplers from

Below: This image shows all the extra care Conrail provides. The protective cloth that encompasses the car, and the plastic box created to match the prototype. Several manufacturers are noticed from allowing quick and accurate ordering of a necessary tool. Check out several of them that allow you to create your own Photoscope Scrap Yellow Top letter.

CONRAIL

Above: The finished car looks professionally painted and will be a unique addition to the fleet. The kit used 12 white transfers across the sides and ends, plus an extra set of white numbers from Micro Scale. Apply the end lettering sooner to make the side lettering less crowding.

Below: The lettering is complex and might even prove challenging to some modellers. If mistakes are made, wipe away the lettering with the water used to apply the transfers and start again. Alternatively, you can paint over the mistakes and start again.

# Display Car

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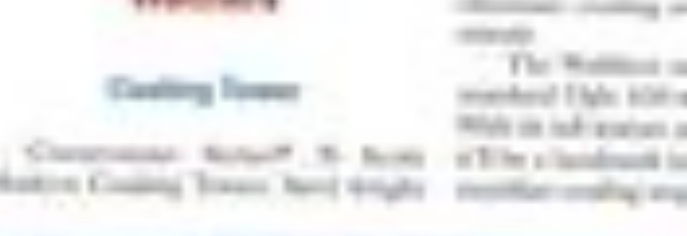
## Walthers

### Cooling Tower

Commercial Scale® N Scale Modern Cooling Tower Set weighs

and passenger cars, longer trains and faster schedules required bigger and more powerful steam locomotives. By the late 1930s, most U.S. railroads had retired all but a few 2-8-0s, 2-8-2s and larger engines. These modern locomotives could pull a greater number of cars over longer hauls at faster speeds with fewer fireboxes.

The Modern Cooling Tower Set, 933-3002 ($59.98), is based on one of the large concrete assemblies constructed after 1930. Because many were built by outside contractors, across dozens of states, designers had to create plans more than one railroad. Because they could effectively handle several locomotives simultaneously they were often located at major terminals. First also found homes along the mainline where they helped



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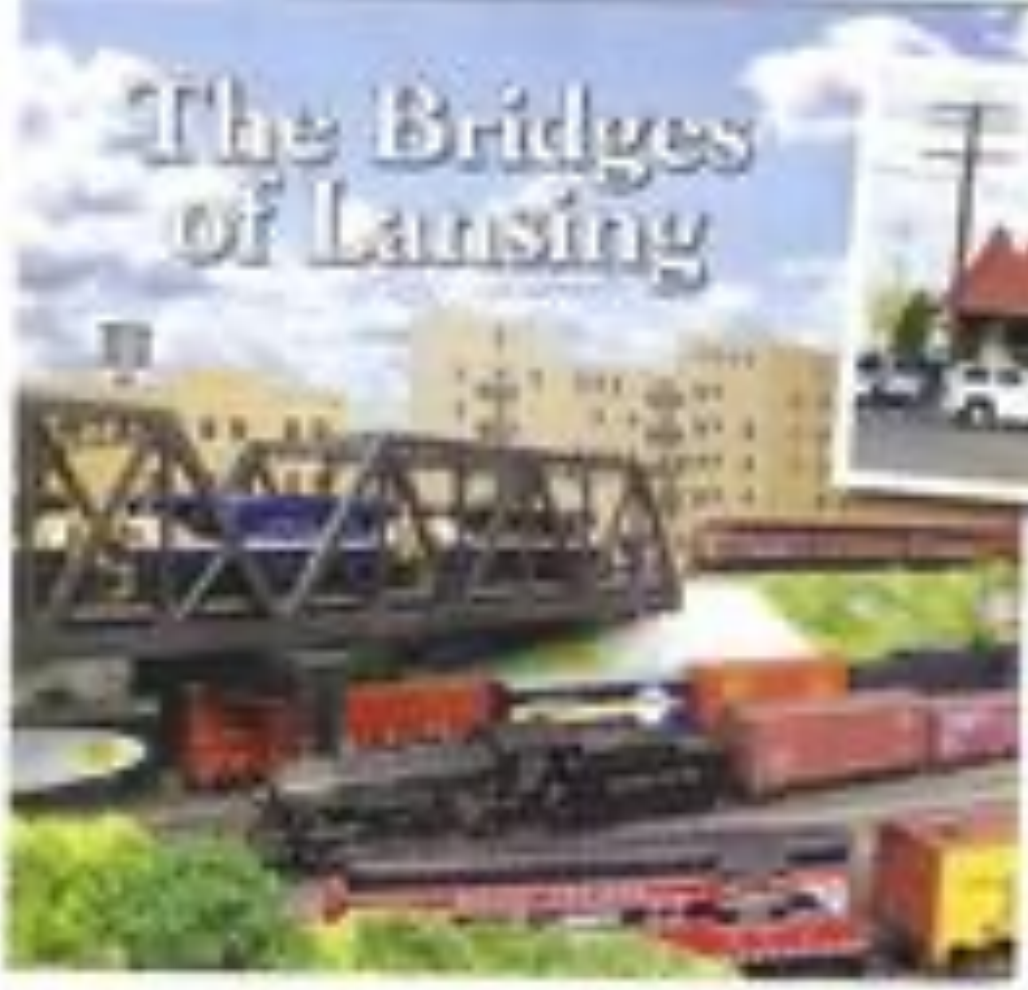
Track Cleaning Cars

# The Bridges of Lansing



Above: Andy Kunz's 18x24 layout is one of the bonus features in the "Bridges of Lansing" print. Using the Great Lakes Express 2007 theme in the layout on page 28 and 29.

Andy Kunz
Originals in the house

A team of the Great Lakes Express 2007 convention in Detroit, Division 1 of the North Central Region volunteers was in Lansing to view the layouts of some of our fine model train architecture members. We are highlighting four of the layouts on this tour in Michigan's capital city but you needed the a set off and'll see on "The Bridges of Lansing" tour.

"Why Lansing? Each of these layouts features the viewers a theme of interesting structures, scenery and track that would thrill the designer needed an accomplish the charter a task to compose them as more information. One models the an scenic ridges of New England, can one members Rocky Mountains, and one the western slopes of the Appalachians. One takes in a mid-western farmland "countryside" scenery, but features a spectacular mountain scene with a see-through bridge.

One of our featured layouts is the Old Great Division of the Great Northern Railway.

*Bob Truax*

Bob Truax (you often see his "Great Northern Railway in the model rag "Railroad" layout. It must be said that our forecast that Bob's report for the report

Left: the exterior look of the former Montana Coach Rail car depot opened in 1907. The station served passengers until it was closed in 1971. Ken and Lori Kaiser in 1972 and turned it into a private residence. Owners Lansing Kaiser and Kenneth Cusick in the doorway are the husband-to-be and father of the Kaiser bride.

Right: Tom is the owner/builder of the Old Gold Caboose at the Great Northern Railway Park Forum. Work began the holiday in 1988 when he purchased the carcass of one of the cupolaers. Bob was retired operator of a local filling station at the time and was heavily into auto racing as the local Midwest Tech Centre as a team owner. He gave up the race team and has never looked back. He is seen here in front of the engine terminal in Miles City, Montana.

Below: The eastbound Empire Builder train crosses the bridge at Miles Creek on its way to Big Sky. Much of Bob's Old Gold Caboose is now called in this scene. Lighting challenge depicted by moonlight formats.

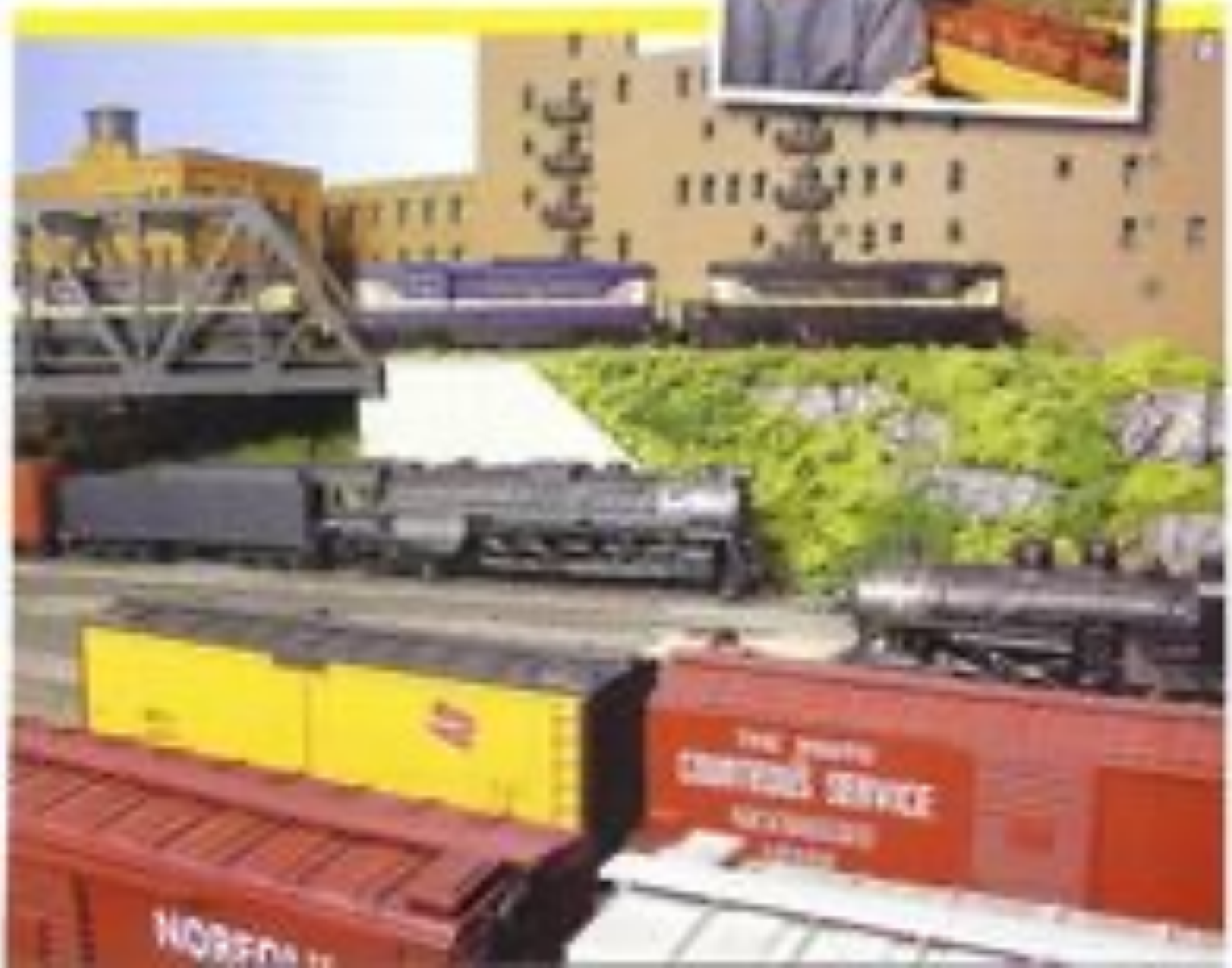
Although the 1961 scale 1/4in Great Western is complete, Bob is not one to stop modelling. He recently started working on very similar but 3mm guage for the opposition of the 14in Great Western. This "Great Rivers" will be an involved working area with a considerably different over theme than the one of the latter. By the time this article was written, Bob had it ready for scenery and the track will be completed by the 1997 Easter Ladies Empire convention.

While not entirely a train nut in our hobby, Bob has chosen to build about his entire layout on the same. He has however, unashamedly sought out help, guidance, and the knowledge of his wide group of model railroading friends. Whenever Bob ever encounters challenges that he didn't feel his skills could overcome, he sought returning them. Walt Griffin, one of the best in our hobby to watch and guide him to better endeavors. But, the cornerstone is all Bob Evans's.

## Andy Keance

Operation is the foundation that Andy Keance has built his 002 Nashville Road upon.

The various stations on his line of run not true it is the fulfillment of a lifetime of dreaming and planning for Andy. He is creating a town-scene-city complex that reflects his extraordinary modelling skills and, as is to-known never fully operational, will provide hours of enjoyment for his operating crews.



Right: Once the bulk of the boxcars on the deck design are in place, a thick layer of plaster is applied to fill the gaps between the cars and the surface of the Nashville Road's city line.

But let's allow Andy to explain some of the interesting decisions he's made over the course of the Nashville Road.

"Realizing that I would not be able to model the real world and the goals I had set for my railroad, I started considering the possibilities that were before me. Whenever possible I decide to use it must be believable to my operators and visitors. If you think as before days what they are, what they are a part of, could realistically be a creature of the real world is unnecessary. A scenic design's hope to duplicate an actual location, railroad just have to create things believing that it could be.

"Nashville, Tennessee, is the main town. It would allow me to model my two favorite railroads, the B&O and C&O&P on a realistic alternate history scenario. As you'll see, the B&O went to the Louisville, Kentucky and the C&O&P went to Memphis, Tennessee. It would have been possible and not necessarily odd for both of these roads to have connected to Nashville. It would also be reasonable for one road to connect with both of these railroads. Both the size of the city and the nearby setting would be perfect for the layout that I wanted.

"Because the B&O and C&O&P model roads a main concern existed for both, is both roads for operation. At the time, the Nashville Road, more properly, the Chicago, Indianapolis, Nashville & Southern (CINS) was born. I would not be justified in either of the two railroads that actually served Nashville, the Louisville & Nashville (L&N) and the Nashville, Chattanooga & St Louis (NC&StL). I decided that they would play a supporting role in the operations of the layout. In this scenario they are still major players in Nashville (however, their roles would be limited as regards freight operations in the two main roads on the layout).

"Multi-deck layouts have been becoming in popularity over the past few years. The advantages provide considerable detail packages in many locations, the double-deck design is a good choice. It can more than double the size of a single deck layout. It has the advantage of giving the operator the length of the mainline run without having to go through the same scenic areas. This greatly increases the realism of a train going somewhere.

"The initial plan was centered with two decks. Two elements a long boundary was to run along three sides of the layout with the third side the short run in the valley above town. Finally, I made the provision to add a third deck. This would allow longer mainline runs in both directions from the city.

"The third design incorporated three decks with the lower deck being the main level with the city and two large yards, a passenger terminal, and several industrial switching districts. The upper and lower decks are visual with small towns. The lower covers the majority of an irregular shaped (Multiple) basement. A peninsula runs down the center of each leg. The design also includes a 7½ foot fiddle line on one area separated from the rest of the railroad. Additionally two large staging yards are incorporated into the long peninsula. One yard is below the lower decks with the other yard above them. The 14 plus long main (protected actually has five decks including the staging yards."

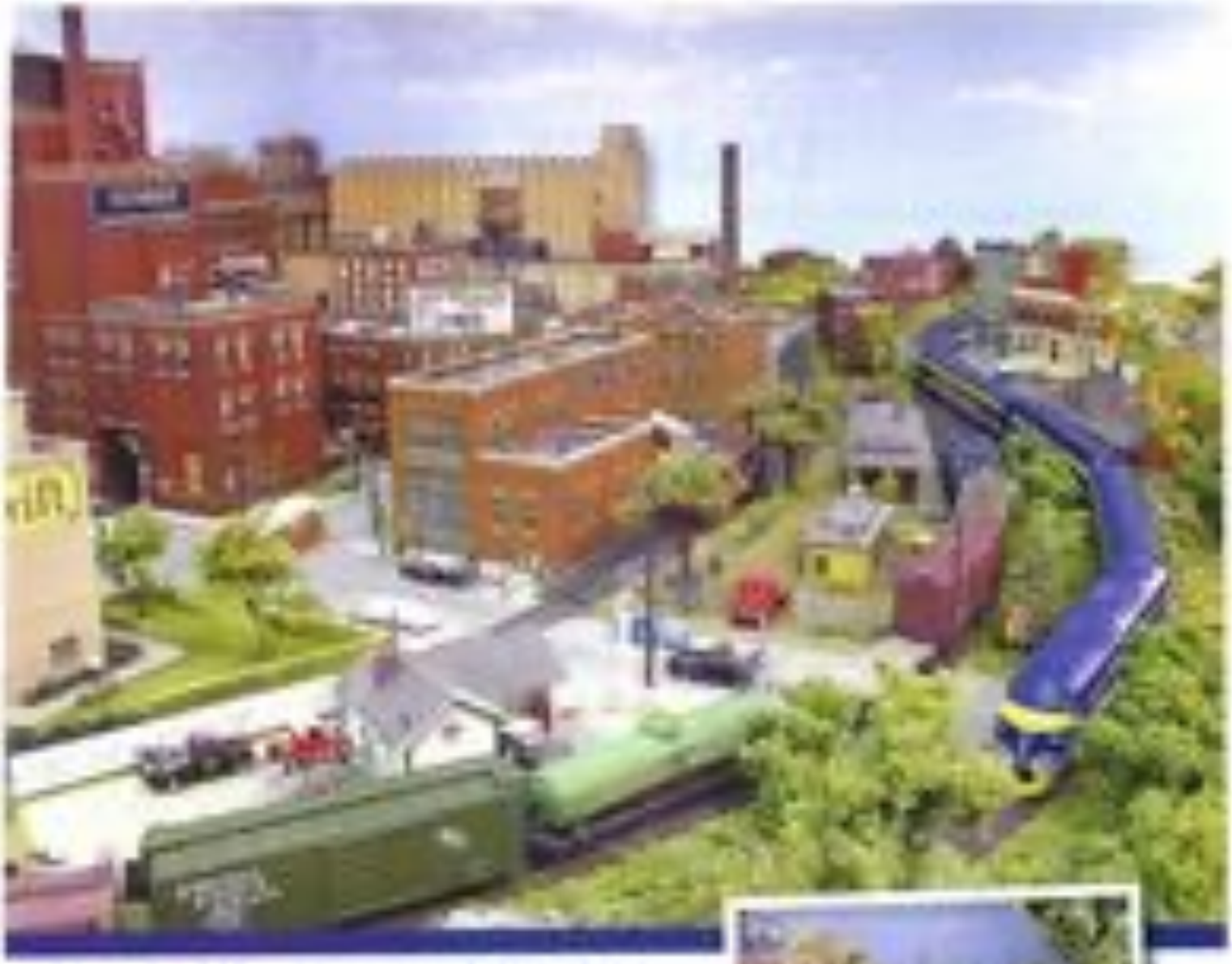
"The Nashville Road is a mainline with 8 foot 3 railroad on its own named Nashville. Over 200 feet of mainline track already have been laid. When completed, the mainline will be over 1,000 feet long. The mainline/yard layout uses L-girder construction to provide an open wide-ground track plan. All mainline tracks have code 40 or even 50 inches. A double-track helix is used to deliver trains to the mainline portion of the layout from the lower-level staging tracks. Minimum mainline grades are only slightly more than 2 percent.

Andy has constructed the Nashville's main power board operating system, and it is one of the most impressive pieces of his layout. He has implemented Pro-Cab's cab-control system and operations program and is also in the process of adding Pro-Cab's Computer Advanced and signal control system as he develops the CTC system that will control train movements on the line. Andy's choice of systems to power his layout is also NCE and its wireless cabs. NCE has become the system of choice for a large number of Operating area layout owners. A local dealer supports NCE, and having a large ownership base offers a very good knowledge base and support group for the inevitable troubleshooting that goes along with any system we develop.

The Nashville Road is a railroad still very much under construction, but by no means is it merely a "Pikeland Pacific." Andy has already completed a few of the areas on the layout, most notably all benchwork has been completed

## David Wentworth

# Lansing Club



Above: Main line train at Perry rolling past the site of Hubbell's first store and grocery business. Following repairs and street paving in 1907, Hubbell's moved across the street to the new and many other scenes of the layout.

Bob Pauly: This is the depot scene at Perry on the "Maple Line". The LIONEL layout was a long-term project and a showpiece that has been in several periodicals.

at Assessment Landing's Clare's visitor's care. This community is located in the old Michigan Central Pere Marquette railway depot on Michigan Avenue, just like he does the main capital building. He has a reserved seats in the concert during can and will be enjoying the view of the CSX and Norfolk Southern traffic from its riverfront windows.

The "Bridges of Lansing" is only one of many model railroad operations you can indulge in during GAT 2001. You are invited to join in on any number of model railroading is done in the North Central Region.

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# D&RGW SD45

A painting guide and history of EMD's second-generation six-axle locomotive


story by Richard Kunz, compiled from "The Prospector" club publication

drawings by Stephen M. Priest, NMRA


**Editor's Note**

Construction Publishing specializes in publications with a historical background. In fact, a selection of railroad-related publications are available at most hobby shops. Readers who purchase locomotive, train, and prototype books, videos, and other publications should not expect to find railroad-related information in publications that are not railroad-related.

—ed.

In 1966 and 1967, the Rio Grande purchased 90 SD45 locomotives. This could be seen as just a typical purchase from what's been a long-running, mostly General Motors Electro-Motive Division (EMD) locomotive. We could just accept that this happened and look at the unit numbers, delivery dates, initial and renumbered in use, and then proceed. But, is that really all there is to the story?

### A Short History

Beginning in 1941, the Rio Grande began purchasing diesel-electric locomotives for road freight and passenger service. From 1952 through 1966, most of the diesel locomotives purchased had four drive axles per unit—two electric traction motors per unit. The major "breakthrough"—or "three moves"—locomotive purchases began with the EMD freight F7 locomotives in 1953 and 1949, followed by a series of EMD 5-axle, 4-GP's, GP9s, 5-GP20s, 4-GP35s, and 5-GP40s.

By 1964, the Rio Grande was replacing older diesel units with EMD's GP35s. Before the Rio Grande began buying EMD's GP40s, supply shortages units in 1966, the railroad had purchased over 100 individual four-motor power units.

During this period, D&RGW also purchased several six-motor power road units. Currently, these were small purchases—four EMD M-6's and two EMD SD40s—used in purchased three Baldwin AS-616 diesels, which used diesel-hydraulic drive units. (If none, only the three Baldwin-Westinghouse were not built by EMD. Rio Grande also had a pair of switchers including some built by Baldwin, G.E. Alco, Whitcomb-Moore, and EMD, and two F9-PB-F9 diesel-electric passenger sets.

Just by looking at the numbers, one could easily see that the Rio Grande diesel fleet was predominantly four-axle locomotives from EMD. You could conclude that the buyer was going to use a railroad using mainly locomotives EMD power.

### What Should We Buy?

Who needed the railroad change directions? In July and August 1965, D&RGW contacted Alco, P&H, GE, and EMD requesting bids for "6 horsepower locomotives of 3,600 hp each." At that time, Alco responded that it didn't have a unit that met the specifications, while GE indicated it was not interested in submitting a bid. EMD responded to the request to buy the 3,500 hp (actual 3,600 hp) SD45 unit that the Rio Grande's basic specifications.

The Rio Grande's original proposal proposals in July 1965 was for six additional 12 units in standard eight-unit sequences. Alco was proposed for new Alco Century 636, which was for six-motor, 3,600 hp, specifications GE's 1967 response offered the 7,200 (horsepower, 1,800 hp), and provided some interesting analysis and comments for using four-motor vs. six-motor units. EMD stuck with the SD45—it had already dedicated for the 16 units to the Rio Grande.

What is a coincidence that the 1966 and 1967 specifications matched the EMD SD45? Probably not. It would be unusual for the mechanical officers of the railroad to want to stick with a locomotive they were familiar with and equipment that were generally accustomed to working on. And, in 1966, the SD45 was the newest high-horsepower EMD locomotive on the U.S. market. But, why did the railroad decide to invest in these 'six-axle' high-horsepower, six-motor locomotives? Why did they choose the 3,600 hp SD45 instead of the 3,000 hp GP40? Why not just two more GP40s?

### From The Files

In the files preserved at the Colorado Railroad Museum, there is an analysis included in the folder for the second purchase order. The analysis was prepared for Mr. G. B. Seibert in Paul D. Reed, the Rio Grande's chief mechanical officer. To be fair, we should note that the railroad already had some limited experience with the three units of SD45 prototypes in the fleet at the present. We can't be sure what type of material was used in the factory testing the first SD45's (nothing was left in the files), but this document gives some light on what they were. Even

Above: Electro-Motive 4500 hp motor-generator set at Pueblo, Colorado in August of 1972. The 4500 horsepower unit was painted red in black and orange featuring small black lettering and orange stripe. Carl Bengtson took the photograph.

lower fueling and why they wanted high horsepower), an entire locomotive.

In response to the Rio Grande's several purchase request (for 12 pre-war, 3,600hp locomotives), EMD proposed 15 4500's, GE proposed 14 U30B's, and Alco proposed 12 Century 636 locomotives. Mr. Rupp compared the responses with Rio Grande's electrical consultant to the level were not the most economical (after investment) to be delivered to the railroad. Alco's price was the lowest, GE's was the highest. Service guarantees were $62,715 for the GE locomotives and $63,127 for the 4500's. EMD/GM also traded at just fueling here (GP30s which is consistent to the contract).

### In the Analysis, Mr. Dave Stated:

"Analysis of the various bids shows that the Alco Company is bidding on a 3,600-hp six-axle locomotive as specified, however, they do not have any of these 3,600-hp locomotives in service as yet. One of the major problems with the Alco locomotive throughout the country has been the engine, and it is questionable whether increasing the horsepower of the same 16-cylinder engine by speeding it up and injecting more fuel will result in satisfactory performance. It would be a monumental task for the Century type for this change.

"The General Electric Company does not have a 3,600-hp six-axle locomotive, and therefore does not have service data on a 3,600-hp, four-axle locomotive. They propose 14 units of 3,500-hp, four-axle, in place of 12 units of 3,600-hp, six-axle locomotives. Much effort was made to show up that, on short fast trains where passenger averages were involved, that the proposed 3,500 horsepower would be the best investment. We do not disagree with this statement as far as they go; however, our purpose in asking for six-axle locomotives was to increase the ability of our fleet to handle heavy tonnage and trains of coal to our Kansas City gateway. General Electric is also increasing the horsepower output of the same 16-cylinder engine as was used in 3,000- and 3,500-hp locomotives. Results have been of 3,500-hp unit and have been satisfactory on deliveries. Although engine [illegible] with a 4,000-hp locomotive is good so far, that is not a complete indication of how this engine may perform when increased 500 horsepower.

"The General Electric Company offered to give us $7,000 (one) per unit for any unit we traded in which [illegible] previous owners. We have no [illegible] engines which would bring that [illegible] $2,000. If GE locomotives were purchased, we would need to purchase additional maintenance parts at a cost of $20,000. Freight rates for complete units from Detroit to Erie, Pennsylvania, would be nearly twice as much as the freight rate governing trailer units to Chicago.

"Electro-Motive bid on the same 4500 horsepower as was purchased in January of this year. The locomotive has proven to be excellent in all respects and gives less than six months transportation. Due to a shortage in steel, EMD is now working on the design of a new turbocharger which can be applied to the 3,000-hp 567D1 engine and increase the output to 4,000 hp. When the development work is completed, the turbocharger is applied to existing 4500's to increase them to 4,500 hp. The possibility of making this increase is of significant importance when selecting the locomotive to be purchased."

Mr. Andrews's report bears heavy summary comments. "EMD 4500's [illegible] 6,750"

### Summary

The analysis discussion shows us not only how [illegible] decided to buy the 4500's, but also why it eliminated the competing proposals and favored the EMD proposal. Included within Mr. Stout's analysis is a description of the operational conditions that were driving their perceived need for high-horsepower, six-motor diesels. The GE proposal for four-axle locomotives was predicted "falling out short even," as Rio Grande was already using 3,000 hp, four-motor GP40s and knew they didn't fully understand the limits for heavy train tonnage.

Rio Grande purchased a total of 76 4500's in three orders for delivery over a two year time period. Eventually, more problems were encountered with the 4500's, as they [illegible] always [illegible] first, but as proven that [illegible] [illegible] [illegible] with the EMD [illegible] fuel pump problems in the 1970s, the 4500's 20-cylinder prime mover became reliable [illegible] capacity to operate their other engines and they were [illegible] to produce 4,500 hp. GE sold both its U-30B and U-36B models to significant numbers. Alco sold 19 of its C-630 locomotives.

Rio Grande
5320

Rio Grand

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## SD45

After its operation with EMDs in heavy train service, the locomotive originally would use 16 more EMD six-axle, six-motor units as the SD40T-2 (72 and SD60 (17) designs, but that's another story. EMD/GE also continued to use EMD-GP40 and -GP40-2 locomotives in its program of replacing older four-motor locomotives for more than their engine-generator locomotives.

### Footnotes

1. Diesel-electric locomotives of the era generally used the diesel engine to drive an electrical power generating unit. The electrical power was usually supplied to electric traction motors, one geared to each axle. If a locomotive had four axles and all four were driven by traction motors, it could be called a "four-motor" locomotive.

2. The numbers: 12 locomotives are of "F3" locomotives, 3 four-unit sets of F7s, 10 two-unit and 2 three-unit sets of F7s, a five F7s, 14 GP7s, 24 GP9s, 10 GP40s, 37 GP40Xs, and 18 EMD-GP40s by 1980.

3. Quoted from the three engineers' letters to Mr. R.D. Wilkinson, Purchasing Agent, dated Aug. 31, 1966. The original is located in the Colorado Railroad Museum library, filed in "MP 600."

4. The four-motor DC electronic commutator is related to diesel-electric locomotive designs of that era. A diesel engine's locomotive was connected to electrical power that fed the traction motors. Essentially, the four motors were DC electric motors. DC traction motors were limited by their yearly power they could absorb (amps) and how much heat they could dissipate. The power limitations and warning problems became severe at slower train speeds. In simple terms, if one wanted to apply maximum power at very slow speeds, one needed to have "five horsepower per traction motor." The SD40-speced 5,000 hp unit as mentioned, and the GE U30B-speced 3,000 hp unit has traction issues. In the latter comparison (versus 4000 hp per locomotive, 750 hp per motor). The U30B provided 2,400 hp or 600 hp per traction motor. There are other factors involved, but in the case, five is actually greater. The second effect was that the SD40 could apply more of the available horsepower to "traction force" at a lower speed. The conditions encountered when starting a very heavy train.

5. Letter dated Aug. 31, 1966, from Rod D. Hunt, filed in "MP 600."

6. Rio Grande was leasing GP40s (using the trailer axle to add load pressure) for the SD40s. In the late-'60s the purchase of GP40s, SW1500 switchers, and U23Bs were made to replace the P-2s (Alco C-420s). Among the recognized locomotives are the GE U30B and the EMD-GP40. The U30Bs were only acquired as "... stop-gap

Before many of you in your thirties subscribe to Rio Grande railroading and locomotive and Mainstream, Colorado or Denver or what. The color were almost 30 years old but the paint and wall were not perfected paint schemes. It is interesting to note that railroads something in this article. A game including the Rio Grande, the line and the Santa. —Jay Haigh/Jim photographer





compact units. Railroads that have had no real service data as to not yet possible to evaluate their performance and maintenance characteristics." Regarding the EMD-GP40s, "... we were happy [1]. We have found them to be very good locomotives and reliable too." The letters go on "GE-EMD-GP40-2" models from Mr. Packard's approval. The AFE "approved the [locomotives] as the 5th purchase the following railroads the buying the GP40s: "These new locomotives are required to operate the locomotives first and pass with higher horsepower to handle heavy schedules demanded under increasingly competitive conditions." Both originals are at the Colorado Railroad Museum Library in box "MP 600."

### Point notes (by the editor)

Rio Grande's SD40s were delivered in the black with Orange Stripe, Yellow Gold, and Aspen paint, which went on some locos, and road numbers up the nose. However, to an effort to improve worker safety using contrasting colors, a decision was made to add to the traditional Aspen Gold around the cab area as well as the area along the walkway on the fireman's side with the first order of SD40s. The Loco is the "Aspen that was" around the fireman's side of the locomotive over the nose of the hood. The exception on the paint scheme was adopted for subsequent locomotives delivered as well as repainted. On the second order of SD40s the "Rio Grande" lettering was enlarged making it more visible at greater distances. The "Rio" was now 72 inches tall and the "Grande" 60 inches tall. Locos 5001, 5002, 5003, 5004, 5005, 5006, 5007, 5008, and 5009 received the enlarged lettering size. The paint scheme also included a black rectangle on the nose of the unit containing the Rio "Rio Grande" herald in Aspen Gold. Locos 5010 forward had the reverse — an Aspen Gold rectangle and a black Rio "Rio Grande" herald. It is unknown exactly who that was, but it is possible that it was an experiment. The new paint scheme with the enlarged lettering and the black nose rectangle was used on locomotives as well as repainted until the mid-1980s when a new paint scheme evolved. ■

# Regular Guys Can Also Earn Their MMRs

**Friendship was the catalyst that helped us complete our MMRs**

[illegible] and Mark at Vista, 2008, photographed by Robert H. Price, 2008.

**Mark:** As a teenager I remember reading magazine articles by Master Model Enthusiast (MME) and being amazed at their skill and creativity. My favorite Full Eye feature certainly paled in comparison to the accomplishments they completed. It was many years later that I realized that some of the Achievement Program (AP) certificates were within my reach and even longer until I really thought I could be an MME. Looking back, the skills I learned during my many AP years actually became the foundation for the skills I acquired while achieving my MMR.

**Jacqueline:** I have always loved model railroading but looked at it as a "boys" hobby until my high school years. That was when I met Jim Neal (Clarkson). He was a local physician that was also a great craftsman and model railroader. I had learned enough to spend my own hobby and Jim would discuss our mutual love of trains. Besides complete commercially ready-to-run locomotives and rolling stock, he also made his own brass locomotives and rolling stock. He really got me thinking about the hobby as a whole endeavor, and his patience as well as his love for beginners like provided me with the tools to sharpen my modest building skills.

**Mark:** After several unfortunately I had a [illegible] experience — receiving some [illegible] awards which in hindsight I had not been [illegible] and was very much [illegible] with great [illegible] of time for [illegible] school boy. Based on my personal skills at seventh grade, model railroading was just what I desired most [illegible] to [illegible] and [illegible].

My interest in model railroading was rekindled as a junior in college when I saw a [illegible] Peters Scale [illegible] [illegible] [illegible]

Above: Lesley Millard and a friend flip by the gym. Left: An Aerospace engineer's department is always judging by numbers, weights and measures. Because of multiple job descriptions, Millard had many of the professionals. So had success to Boeing Airlift Corp a whole system. So he joined that grand name. Middle: Right: Mike style judges some machined work while riding at Mapleton's 17th green.

as important as was a simple baseball game when it was my only way into the YMCA was free). I did, however, become aware of the MDR program in that I was visibly nervous of Mom. I hoped the MDR achievements program by the back of my mind because it impressed me. I realized that it would have to wait until I could provide more focus on my life. I did manage to get my Master Backcourt Junior certificate and Master Builder's Cross in 1980.

**Work** I graduated from college in 1983 and entered a Master's program at the University of Kansas. This was great for my career but not good for my social life. MDR, this time, took a back seat. Still, my desire to succeed and working toward my Achievements Program. I enjoyed the workshop world, play, participation and got involved with the 1988 YMCA national convention in Kansas City and started planning a new home. This put the MDR on hold as well, but what an experience to see how the community came together.

It was during the conference that I met a friend, Steve Hawkins, who was a Vocational Rehabilitation counselor for Veterans Services. Steve's suggestion was a good one:

people to follow me – which – I was hard to the game for my MDR. By the same time I completed my paperwork for the Model Bookkeeping Assistance Advanced. I had been operating my house for about ten years so the individual organizations had been just too overwhelmed. I have two certificates awarded in 1990 got me nothing else.

After the event in the next home, I was so consumed with the love bound that the MDR was put on hold again. But the one the dead heart. In 1991 of 1990 just 1995, I know, ... Stephen Parris were now offered suggested how to read as our Model Bookkeeping Club combo – our supplies were another of us had really found and were better. Stephen got all the components together so we knew and how to try work together. It was an interesting exercise in collaboration as we discovered how to be our the work



employer, make the grants, and generate clients. If I had not worked with Stephen I know I would still be just a gym with no visible signs.

**Disciplines** I continued this after finishing 11 outreach as my Mentors I had previously missed several opportunities to use that something toward my MDR. When I retired and transferred out from in 1996, I embarked on a new challenge with the goal of using it for my MDR. The paperwork had always meant to me more – I wonder much extra credit that 50 was worse. But since I started was a the homelessness very easy and actually fun. The national was started in 1989 and finished in 2001. I was able to list on my final certificate to attend a work-

Left: Wayne Wade Technician and HP Department Training Manager Pat Hutchison leaned forward judging positioning on Stephen Prince's head in Middletown. Pat retired one week to start her new profession of performing music.

I chose awards, events from Santa Fe's Exquisite Refreshment City awards ceremony and events above them. After several beers (and I was finally ready for my judging), I set aside a Saturday, bought some good-quality sticky and invited five local NMRA or ex-member NMRA judging pairs. Pat Hutchinson, Larry Mitchell, Joe Bettenhausen, Mike Hale, and Marty Vaughn (yes the same Marty Vaughn from our college years) showed up and graciously spent an afternoon judging models. By the end of this day I was HOOKED !!!. I drove the whole budget. Receiving my NMRA was one of the best moments in our model railroading life. It stirred me to discipline myself and set goals for our model railroad. The current contributors got me that and to know that I had truly brought shame prior to the NMRA experience. Although I will probably never have to go through the process of membership, I encourage anyone thinking of joining their NMRA to do so. It is rare everything you will achieve overnight, but it is a very worthwhile goal.

**Mark:** As soon I got a Master Model Railroader back looking back, here are some things that I learned and discovered.

- Many of the projects that I wanted to do to manufacture in the Achievement Program, including servicing/detailing certain cars, operating railroads, working servicing on the fleets, and making any money. Being recognized for my efforts only required that I complete the paperwork.
- Being in an active modeling community is a real boost toward advancing the NMRA. Not only were my NMRA friends encouraging, they actually took an active part in helping me to achieve my MMR. They allowed me to operate their layouts, provided models for me to use in my layout, included me in club and NMRA activities, and mentored me through the Achievement Program.
- I gained a tremendous amount of skill and confidence through the Achievement Program. Award examples include Scenery and Trivia. I learned how very easy scenery really is and it's one of the most creative aspects of the hobby with our Achievement program. I also learned how to kitchen track, which was one of my phobias, but now I have to that and plan for several custom-built pieces of track work on my layout to increase it's realism and operating fun.
- I don't think you have to be a big club to get the NMRA. While I don't recommend that someone take the 11 years I took, I think it is important to take your time, do it right and enjoy the ride.
- I have made a lot of life long friends on the path to the MMR. I guess these ones will last and have traveled with some of them on train outings and train shows in the region. I value our relationships with these kind and generous people and feel we have all brought their friendship.

I hope that some of my experiences and observations will encourage others to consider and participate in the NMRA Achievement Program. It is definitely worth your while and will benefit the hobby. ■

## Award

### Golden Spike Party

by Tom Browning, CSR Track Chair

I have recently had the pleasure of participating in what I call a "Golden Spike Party." Several of us NMRA members got together at a candidate's layout to check his/her achievements against the requirements, taking the final glimpse as we went through the process. The theme of these parties is to make it fun for everyone and enjoyable. These celebrations are extremely important. After everything is in order, we sign the completed forms, make a copy, and mail them to our Region, NP Chair, in Reno, NMRA.

While waiting for the achievement certificate to arrive, we make a scrapbook that includes the celebration from the NMRA website, the application submission and digital photos taken of everything used to make the requirements. Because people are important, we also include photos of our participants. When the achievement certificate arrives, it also goes into the scrapbook.

Those who have made great recent celebrations were Brenda Gantt and Jeremy Anderson, Larry Sargent and Stephen Moore of Arizona. I recently received their achievement certificates and was pleased to see how all available awards are now. This award said party is a wonderful young club experience, so we can't wait to see what they will do next. It is a great way to be recognized and have fun while earning certificates. It's a win-win! ■

Above: Larry Sargent posed with his certificate. Completed scrapbooks featuring the Golden Spike certificate plus all of the achievement paperwork, digital photographs completed the award and evidence that the achievement making it an interesting read.

Left: Stephen Moore also completed the Golden Spike and was more than happy to show it off after passing a test the judges were.

# Virginia & Western No. 430

## Scratchbuilding a Class P-4 Observation Car (circa 1940)

story and photographs by
**Doug Architzel, NMRA**

I have been a life member of the NMRA for many years (we have never participated) on one of the events offered by the organization – a step back until. Several years ago, Neil Brown, a Master Model Railroader, created his one of my dies to attend a local Mid-Eastern Region convention and to enter one of my models in the contest. He attended and I found and enlightened me on what the judges would be looking for. We were last candid, based on the Southern Railway passenger service in Salisbury, North Carolina, with Fort Pitt Associates and Best of Show. I was hooked on the NMRA Achievement Program and have been working toward my MMR ever since.

The last Achievement Exhibition that I saw the MMR I Master Builder Cars. I model a freelanced railroad called the Virginia & Western Railroad with rolling equipment and motive power based on the Norfolk & Western Railway. Its many routes square-coaled that cross ties are produced by Riverton, brought up the rear of my smooth side passenger service – a far cry from the round-roofed steam used on N&W's Pocahontas Division. So, here was an opportunity to create the need to have a photographic record of my creation. I've for my passenger service, and hopefully to earn a Master Award to work my Master Builder. Car certificate. My modeling skills are not sufficiently honed to tackle the 14 points advocated by accomplishing and still obtain the 75 points required for a merit award, so I chose 5 but to earn three awards. I also wanted to model the complete interior of the car.

The P-4 class observation car on layout style now the N&W car No. 301 as shown in several 1941 Minister Models articles. Rev. Jim Nichols, a member of the Norfolk & Western Historical Society, advised me of these articles and provided detailed knowledge on the interiors of the car. I found additional articles on the remaining four cars of the Powhatan Arrow. Information from The Arrow of Wheels Headed and Arrow of Steam Passage Arrow (1937-57) was also used. This model represents the car in the 1940 period when the N&W removed the crown drive for water-screen for maintenance. The rods changes are the evening for my trains, especially with the smaller. I planned to replace every aspect of the N&W car from the exterior to the roof to the interior down to all the equipment inside the car.

I constructed my P-4 observation car from scratch and have since seeing what the door, adding the stairs and roof and door details. The floor is 0.090 inch styrene. I made the structural underframe from .060 structural styrene sanding with the bolsters, followed by the screw heads and finishing with the Flat Rail-ely with ordinary stock, I installed a rigid and weight supports at the bottom and two holes for piping – just like the prototype. I drilled and tapped the bolsters for attaching the trucks. I used Dyn. M Kadee couplers.

I fabricated the car's sides and roof using sheet and dimensional styrene. My approach required the modeling of both the inside and the outside of the car. I built the inside of the car sub-floor using dimensional styrene from the floor to the ceiling. Styrene spacers formed the seats and the aisle. Signage above the inside back wall. The car's "least-fun" and presented a significant challenge. Here's how I did it. I assembled each car side one-eighth the last 20 feet at the end, and then installed those sides to the floor. I then carved a wood model to the shape of the back roof and placed it inside the car. Next, I fitted each piece of styrene around the model and then glued it into the existing area for

**Above: The interior of the car is fully detailed but its fabrics in the cafe area to the bar and lounge area. A small silhouette is seen in position in the middle of the car followed by the standard lounge seat at the end. The interior ceiling includes the cove and continuous fluorescent lighting.**

**Below: Many of the underframe details were identical including the electrical conduit at one side, and gauze ends, as well as the standard equipment.**

Above: The Virginia & Western steam engine on new track with a removable roof section, when removed, reveals a complete interior.

I used Glamour Finishing paint for the AC compartment and condenser, created vents, and then compartment numbers. I installed several of these castings to represent most closely the arrangements used on the P-5 cars. I made this de-vestibuled style based on photos. I experimented playing chords on cookies, and wrote them by hand with of correct notes. I installed a fully developed brake system, including the real signal lamps. I also provided rear lights.

I fabricated all the grab irons from wire, drilled holes, and applied them to the car. Again, because the roofs of the car is rounded, each grabiron had to be rounded. Both end filled with spoke 'S' pattern vent, ladder, and walkway at each platform. I installed set signal, and made the end fittings, and they attached number lamps on the roof – just like the prototype.

Above: Doug Kirkpatrick, over on MMR, was attracted to beautiful car that was passed down to him from MMR contributor in Philadelphia.

The interior color of the car was painted first, followed by the exterior sides. Once the sides were dry they were masked and the roof/clerestory painted numbered black. Using a dark brown, I painted the letter gasket around each window. The interior of the roof was painted here, followed by the interior. I developed the private road decals from my own art work. I applied a 1/16 inch strip decal to both the top and bottom of the car. The placement and type of lettering on the car followed the N&W prototype. My road name comprise the word "Virginia," so I decided to use the name I would choose as the N&W used Pocahontas. After applying the decals I sprayed the car and it had to cover the edges of the decals. According to information from the Norfolk & Western Historical by Wallace and Billy Joe Anderson, these cars were painted Tuscan red with a black roof, and black underframe and trucks. The P-5 interior was tan and grey with alternating red colors, spruce ceiling, and grey curtains. The vestibules were another story. I painted the inside black and the sides and sides dark grey. Once the car went the paint were all the time you where the wheels would come with the rail.

Now I finally had the proper-to-scale interior observation car to bring up the rear of my road passenger consist and a second place plaque from the 2008 National Convention. However, I needed a second observation car because the rear end terminated trains were doing my operating sessions. So, I highly recommend a second engraved Memorial N&W round ended observation car – how can a modeler ask?

Above: The interior of the car was faithfully reproduced right down to the roof ribs to the offset vents. Details of the car.

# Work Car

Modeling Thoughts

## My Trip Down Model Railroading's "Memory Lane"

article by Tom Troughton, MMR

Reading over an editorial in one of the popular model railroad mag magazines the other day quickly reminded of a recent passage I was working on a model railroad layout with my father. The rotten had mentioned another great dad raising adventure and pleasure to create scenery. That term was words we regularly used back in the late 1950s. Like we we don't use a newspaper and always found a way to come up with something to make things work. It reminded me days for come home with a couple of boxes of leaded up, brick-thick white chunks of Styrofoam that had a slight resemblance to stone.

That was an IBM computer service registered which provided free access to several companies and plants around my home town. While he came home with the pieces of what stumps, he told me that when he was finishing up a project at a power plant he noticed one of the maintenance guys throwing loads of the stuff into the trash. When he asked what was being thrown away, the man told him they were replacing the insulating ceramic cores of the feeder pipes and this was the old stuff. Having a good sense of thing before time, he asked if he could have some and the rest is history.

What they were throwing out was an heavy insulation that had been wrapped around the pipes - the science there was a mystery to me then. We broke the chunks up with our hands and mixed the fibers with a little plaster to make a paste. We also spread the paste over screening that had been applied to wooden forms to make landscapes for our trains. It felt like working with papier mache and was really special using the mixed with our hands.

But our main focus as a model forward of the dangers of using asbestos fibers in a scenery material back then. In fact, it believe it was an accepted modeling practice around the country. Eventually we learned that the fibers were dangerous and could eventually lead to lung problems. I am not sure a finished landscape piece of scenery kind of the we have to decide before we finally use one of it.

Well, this caught me from to learn my early by reviewing the large model transport cars from Rochester Pipes the plane ends and spilling the soft white insulation material to ourselves and our train cars. We eventually acquired some really US Army rail to replace the negative calculations. The wooden stockpile served a purpose for us and the Rochester Plastic. I still use the HO plastic cars to carry my pipes to my layout to build the spikes while they were spread over the city.

I mentioned another radius. We as were had fourteen of that seasoned cars. My dad loved working with wood and since the wooden box because that, we would require a cut and all is damaged or old wooden scenes. The three pairs were stockpile various colors of the box and there is old newspapers spread across the floor. Ground have had not been laminated or conditions yet. That was to cover a few threaded bars on a couple of workbenches from the Kansas City area.

Another piece of my trip down memory lane, "Memory Lane" has to do with something called "water glass". Actually it was sodium silicate - water glass to geologists types. My first experience in it was at a young teen car was on our own other formal going to the town club meetings with my dad. He belonged to an O scale club that used the simple liquid to bond ballast in place. The members used to like hours of background, which looked like sandpaper, mixed in water, and spread it between the two rails that ran the center with their fingers and a soft brush, very much like we do today with other types of ballast. Sometimes thousand of using dish washing detergent, which may not have been used back then, they used service detergent was delivered the hardware like we use the cans of used something was thoroughly dissipated. When we would come back to the layout a week later, the whole we

ballasted rubber were as hard as a rock.

The material worked great for a while, but when I returned home in the late 1970s and started one of my first remodeling projects of that O scale club, he showed me some evidence of what was left salvaged when the club disbanded. The water glass and sand ballast were covered with a powdery white substance and crumblings. Apparently the material had hardened shortly after steam power and had started to crumble again.

Something needed replacement, but what a long way but. One of the ways popular newer they needed be used in a control panel was an Atlantic electrical. For me talking about the control items being offered by the Atlantic Corp. Not the large complete devices that were about four inches in diameter and could handle several amps and connect to four leads. I recall the members of the electrical found it was also using dozens of these

## And Now For Something A Little Different

from the collection of Louis A. Marre

# Ten Minute Train Detector

**An effective and easy to build train detector circuit**

story by Rory Dwyer

A viewer who owns a layout with a large amount of hidden track can certainly relate to the viewer visiting our operation got crunching his or her nose pressing a nearest portal to see and hoping the engine will reemerge from the other. By running a few trains and about ten minutes over can build a train detector that will provide visual cues indicators.

The "Ten Minute Train Detector" was we wanted because of its simple design. It will when there has stopped moving. The figure below shows the schematic diagram of the circuit. Basically, it consists of a general purpose NPN transistor, a photoresistor mounted between the two, a potentiometer to adjust the sensitivity, a 1.5 volt battery, and a LED to indicate when a train is present.

All of the parts for the "Ten Minute Train Detector" can be obtained at your local Radio Shack or through an electrical supply such as Digi-Key (www.digikey.com) or Mouser (www.mouser.com). Part values and quantity are not critical to the operation of the circuit. However, basic soldering skills and some electronics knowledge are beneficial in the success of the project. Likewise, a circuit board is not required, but can ease the helpful if several circuits are being built.

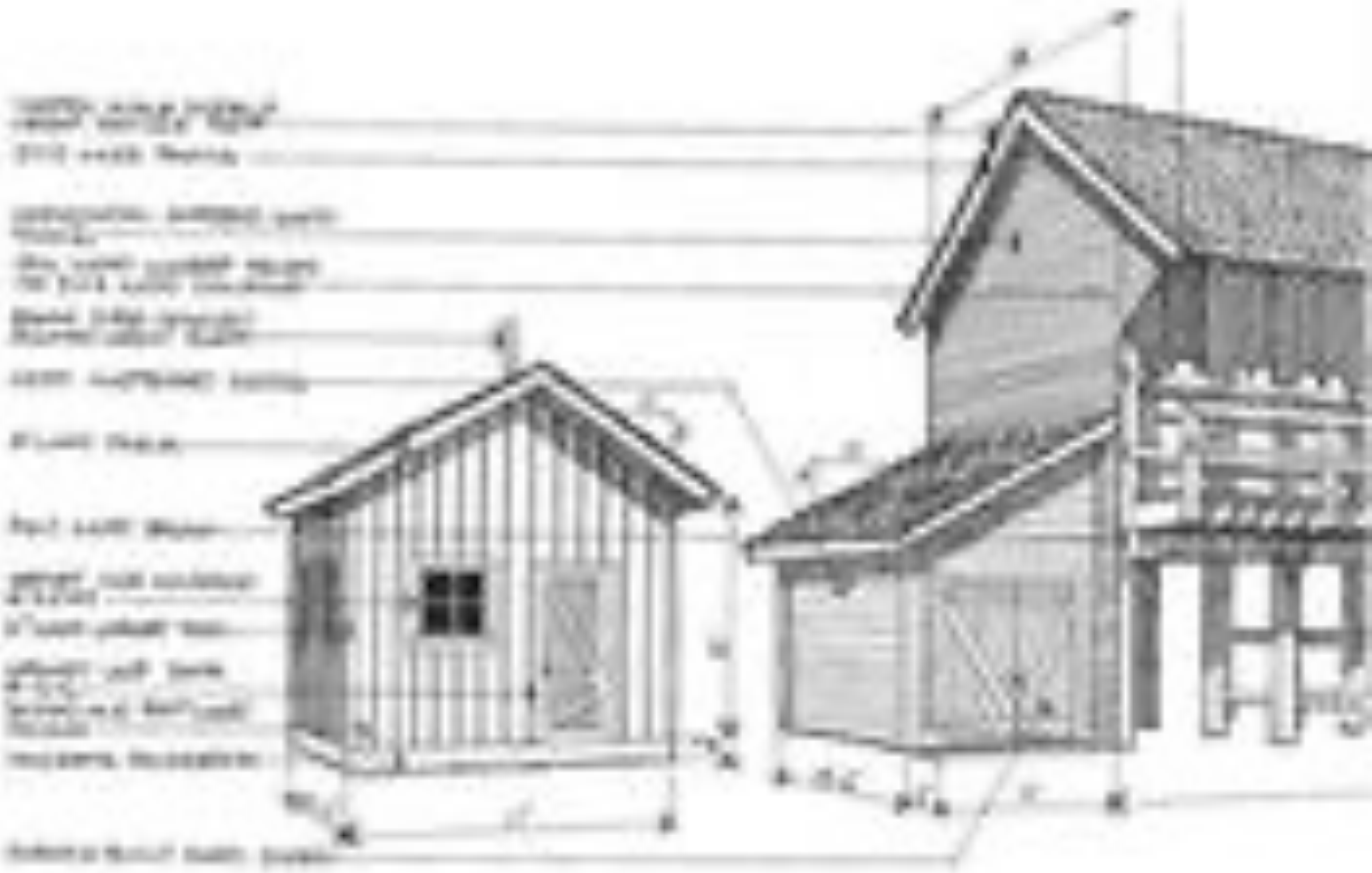
Using the "Ten Minute Train Detector" is very simple. When nothing is blocking the photoresistor, adjust the potentiometer so the LED turns off. That's all there is to it! When a train blocks the photoresistor, the LED will turn on, indicating the presence of the train. Occasionally, the potentiometer may have to be adjusted to compensate for varying light conditions. Small light bulbs, such as the size of a grain of wheat, are ideal to provide a constant light source to trigger the detector. This is particularly helpful in mapping areas or other dark locations. It is also beneficial to place the light source on a large color directing the light beam to the photoresistor.

Installing these detectors in regular intervals along a section of hidden track for operators can visually monitor the progress of the train. Interfacing the output/control of operating train large portions of hidden track. The circuit is also great for planning sectional staging areas. Everyone has at least one scenario or speed model railroading.

Enough with New England already! Don't shout the praises of Cincinnati, Cincinnati, Ohio! Every Three Are You Forgotten.

Let us assume for the purposes of argument that Memphis, Oklahoma, is in the South. I can picture in the Kansas City Southern regularly staged a train clear between Dallas I and I, the Southern Belle. The tourists sit Riverside, beyond a passing track, and thought exploded inside me of it or stood aside for the passage of Nos. 1 and 3. Were we on the last Amtrakers 1992, Newsletter? No. 3 and/or a short section was also overlooked? No. 1 has departed. Nowest bet today a whole 102 No. 24, directing the weather-worn of a long canvas up the road. There in style motorists employment seemingly assessed cars sight-seed tourists' hearts, pushing less than an pedestrian. I was curiously fitness-less still, an extremely organizable passages classic. The Knight do not a a Bill B locomotive set aside and a wide body to yesterday morning. Today it is blessed by an EMD engineered. Fairbanks Morse Rider A. The locomotive is by background to prepared for a long where, judging from the set of its mouthpiece coal brain. The crushing knot of Jacks is still pass daily, or require relax the weather. Miscarriage's is fine, as long as the correct grade is EMD. I hope an Ed and an Admiral on the secret has taken the New England Limited.

L.A.M.



# Lana Lumber

Original scale structure drawings

Commercial, Port Hammond, NSW

Inspired by a good friend and a run-down model in Port Lana, NSW, this is a structure that can be constructed as large or as small a size space will allow. The builder's company was sold to the primary owner for the building materials necessary to construct the structure resembling their earlier railroad layout. It is a good reason for a railroad selling on one side and a lot of track traffic on the other side of the structure. Because all of the business is carried on outside in the weather, you cannot have any more figures associated with the activity as a builder could – a very popular spot on your railroad. The building's open wood framing also adds a lot of interest.

The open wood framing and cabinet siding is pre-painted with Rhinocolor Desert Grey Medium to give it a weathered look before casting and assembly. The primary structure consists of seven 8x8 columns and wood 8x12 beams. Roof rafters and runner joists are wood 2x10s. Between ceilings are constructed of 4" wood 4x4 posts, a wood 2x6 top rail and a wood 2x4 bottom rail. Electrical supports across the face of the 8x8 columns are wood 2x6s. Cross bracing at the columns and knee posts are 2x4s set diagonally. The wood framing

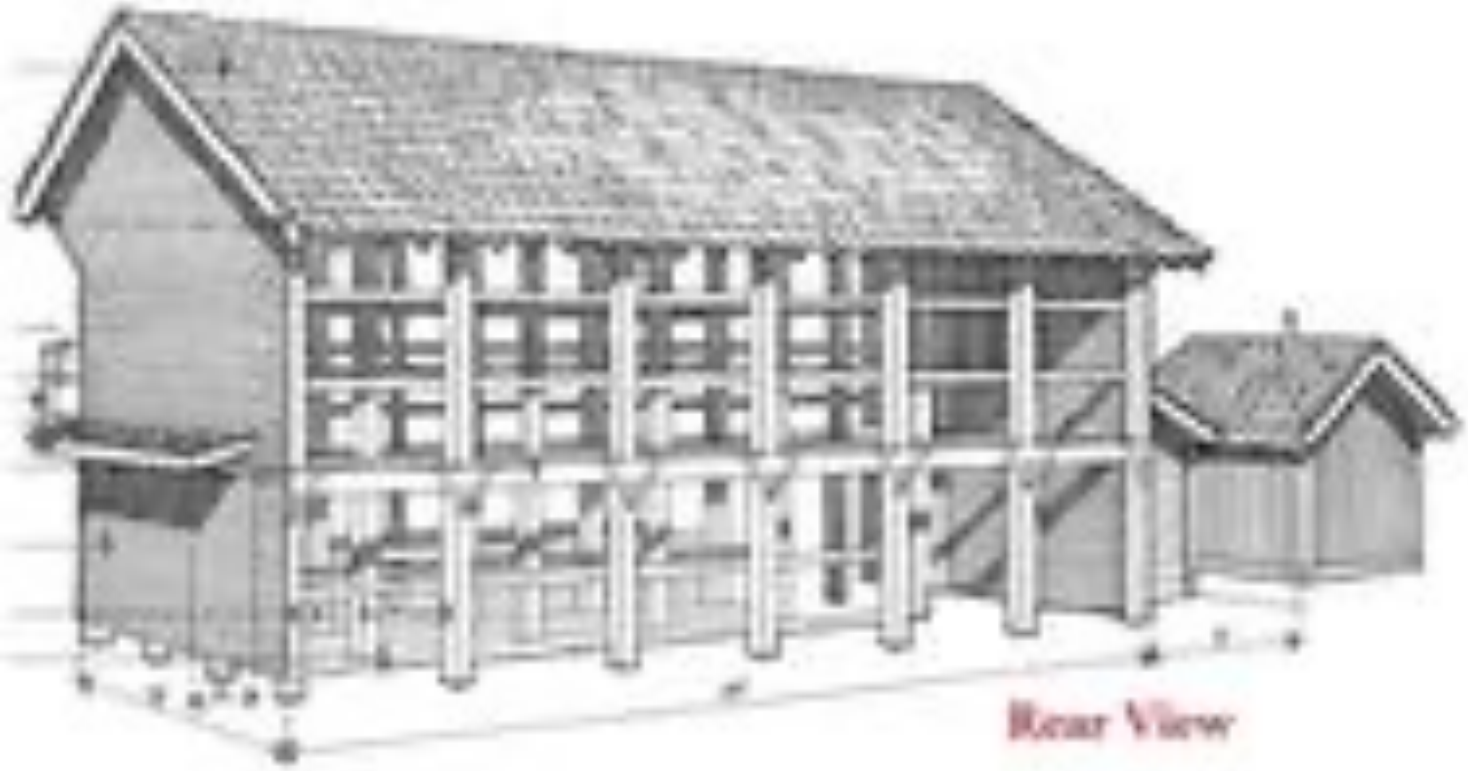
Front View

are 2x10s and the roofs are covered with cedar shingles from Sierra Forest Products with a 12-inch exposure. The roof shingles are weathered with alcohol and India ink. The storage-shed door is a mixture of scribed wood siding and 2x4 wood trim and bracing. The finisher is custom-mixed, unpigmented stained and glazed. The subfloor joists are also located on top of the horizontal bracing. These stacks are left the natural wood color and material variety with the weathered wood structure.

The finisher company effort to weatherize the cedar was enough that the windows and doors are Grande Low- and are painted to a contrasting color to the siding. Signage is added to the peak of the roof gable and white and trash, cross creative creation creations. A small sign on the office was two trash cans.

Ray Hammons, AIBB, the designer of the award-colonial structures now appearing in Grand Rapids, is a practicing architect as well as the current NAHB Achievement Program General Manager. He is the author of *Early Wood Frame and Stone Structures*, containing three plan buildings designed specifically for the modern craftsman. Each building design is complete with floor plans, elevations, and perspective sketches drawn to scale. These plans are designed to fit the limited space typically available on a normal subdivision homes.

*Early Wood Frame and Stone Structures* is currently available. For ordering information contact Ray Hammons, AIBB 1111 Valley Lane, Overland Park, Kansas 66211.



Rear View

# NMRA BULLETIN

## DEPARTMENT & PROGRAM MANAGERS

## REGION PRESIDENTS

## MEMBERSHIP SERVICES

### NMRA Showcases Contest wins a prize once only

The NMRA has had membership contests before, but not like this one's. The new fact is prizes totally "prize contest" participants to give away 10 brand new locomotives to only three months.

The contest ends off on December 1, 2006, and runs until January 31, 2007, and ends the five-year NMRA contest. Are asked to get each new NMRA friends to sign up for a full membership. Each both the new member and referring NMRA member will be entered into a special random drawing. Each month for three months the NMRA will draw the names of three new members. The new members and their referring NMRA "sponsor" will each receive a brand new locomotive.

The prizes were donated by Atlas, Life-Like, Bachmann, and Kato, and include assorted prizes in N, HO, On30, and Large Scale. Models on the prize-every month include an Atlas HO, a Bachmann On30 2-4-2, a Kato N10, and Life-Like PS/FW units.

Now's the time to sign up about "on the fence" friends of yours! See the ad in this issue "Gift Guide" in this issue, then make a note of it to distribute to all your friends. Then it get all the benefits of NMRA membership for a year. And you both may get a little more than it!

## MEMBER AND ACHIEVEMENTS

### Don't Miss an Issue—Renew Early

Magazine mailing labels are generated 3 months ahead of their issue date. To avoid missing an issue, please renew your membership prior to the expiration date.

## ACHIEVEMENT PROGRAM

### NAGRA AP Certificate Bonus

[illegible] NAGRA AP Certificate of Achievement.
[illegible] 1000

[illegible]

**Lone Star Region**
[illegible]

**Mid-Continent Region**
[illegible]

**Northwestern Region**
[illegible]

[illegible]

**Mid-Continent Region**
[illegible]

**Mid-America Region**
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**Lone Star Region**
[illegible]

**Mid-Central Region**
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**Pacific Northwest Region**
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**Pacific Northwest Region**
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**Mid-Continent Region**
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**Pacific Northwest Region**
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**Lone Star Region**
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**Mid-Central Region**
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**Northwestern Region**
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**North Central Region**
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**Pacific Northwest Region**
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**Northeast Region**
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**North Central Region**
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**Pacific Northwest Region**
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**Mid-Continent Region**
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## ANDY'S CORNER

**[illegible] Pilot and NDSR #[illegible]**

[illegible]

**Rick Mc[illegible] and NDSR #[illegible]**

Rick McCollum joined the NDSR in July. Rick has written [illegible] Pilot, NDSR, about his journey on page [illegible]. [illegible]

## Research & Test Car

Underwriters Olympia & Yuma, Arizona
**Detection Illuminants & Conformance Requirement**

The mission of the UW fleet of the last mile is to test equipment in preparation for a wide the conventional Safety Standards and Environmental Practices. This effort is undertaken for the benefit of the workers and to ensure the workers' and local communities that participate in developing the Safety Conformance Code are kept together.

Product Review

**Athearn's Shady Shack Mill Cars**
by Dean Wisdom, MMR

The Shady Shack Mill Cars, made by Athearn, Inc., a division of the Genesis Components are available as either wood sheet single auto mill, a set of wheels and weights on each mill on an 8mm axle with solid brass bearings and metal wheelsets between the cutters and mill axles to accommodate normally heavy double mill cutting tools. The additional wheelsets on the Shady Shack cars allow additional operating and loading ability allowing heavier loads than only conventional, conventional double mill cars. With its low center of gravity it can handle a single 40-foot container or two stacked containers.

The Athearn RTR model of a Burlington Northern unit is ready to run just remove the trucks padding between the containers and you're ready to go. The body and trucks are all molded plastic. The body cast are accurately Burlington Northern engineer and the coupler box covers are held on with threaded steel screws at the correct height. The trucks are molded black plastic and are also connected to the bolsters with hardened metal screws. The wheelsets are turned stainless steel screws and mounted on black plastic axles with RP-25 tolerance.

The unit can be operated on an engine as a 1.25% grade before the motor is rated. NMRA standards suggest a car weight of 3.75 ounces. This unit comes to an 4.25 ounces. Although extra weight cannot be added to the car due to its light construction, additional weight can be added to the containers. Care will have to be taken to open them without breaking the seals. NMRA recommended clearance of 3 inches minimum will have to be followed as on this unit. Safe loaded speed 3.5 inches.

The body for this car are two components, a Shady Shack 42 foot container capped by a China Shipping container. According to Athearn the prototype containers loading is 40 foot on the bottom and as much as 10' can stay should you want to swap loads for a different look.

The paint is very smooth and the lettering is sharp and clean. Most of the small print and logos can be read with a magnifying glass.

Dean is Dean Wisdom, MMR

Show Your Support
Howell Day Museum

# Commemorative Car #1

## #5516 Gorre & Daphetid® #5573

Some will X "The Gorre" (Short "Our GAD"; first owned) anonymous male & the letters Gor inspired them to become nicknames.

Also, Whitby subsid **Gorre & Daphetid** RR still used nine cars of the amalgamation, named on the well-known steamnickers, and operated by nineteen over 30 years until his death in 1972. It is a very well-liked GaD connoisseur to maintain cranes in this way.

The WABAV Howell Day Museum celebrates Alden's creation with its first-ever Commemorative Car, **The Gorre & Daphetid® #01-5A**.

The train comes in two road numbers – #5516 and #5573 – meticulously linked's original not one alteration (#5516) and the years of his birth (1916) and death (1972).

Add the **GaD®** cars to your collection today! And watch for future NMA Commemorative Cars.

LIMITED SUPPLY! ONLY 250 CARS OF EACH # MADE

| Package | Price | +S&H |
|---|---|---|
| 1 car | $15.00 | $3.00 |
| 2-car set | $25.00 | $5.00 |

All proceeds benefit the Howell Day Museum.

Order from the NATIONAL MODEL RAILROAD ASSOCIATION® by:
On-Line Store: www.nmra.org • Phone: (423) 892-2846 • Fax: (423) 899-4869
Mail: 4121 Cromwell Road, Chattanooga, TN 37421

# Library Car

Book and Video Announcements
by Sharon Lundeen, Library Director

Publishers of books, magazines, DVDs and videotapes, audio recordings, and computer software from every corner of the country should send a copy of their product, along with suggested retail price and a brief, 100-word description or "book announcement," to Rutherford Memorial Library, 111 Crossroads Road, Chattahoochee, TN 37415-2119. All announcements will be placed in the Library for use by NARBA members and other patrons.

## Books

### Gold Mining in North Carolina

By Richard E. Bumpy and Brian Ed Linn. Available from Rutherford County Public Library Archives and Historical Association, 1986. 112 pages, soft cover, illustrated. Mail inquiries to: Rutherford County Archives, Rutherford, NC 27415-0112. To order, call (919) 555-7654 or visit http://www.rutherfordcountyarchives.org/goldbook.html. Softcover, 192 pages, black-and-white illustrations, $14.95, shipping included.

Today few people think of North Carolina as a center of mining activity. Most recognize that state's long agricultural history and its equally impressive industrial heritage in textiles, furniture making, and tobacco manufacturing. Yet for virtually the entire first half of the twentieth century, North Carolina was the preeminent state in gold mining. The first documented discovery of gold in the United States was made in North Carolina in 1799 at John Reed's farm in Cabarrus County. This volume traces the history of gold mining in the Tar Heel State from the initial discovery to the twentieth century.

### Mint a Design and Build Your Custom Railroad

By Jack Tennessee. Available from the Rutherford Publishing Company, 12345 Crossroads Circle, P.O. Box 7515, Weatherdon, MT 54747-7515. To order, call 1-800-555-6789 or visit www.rutherfordpublishing.com/railroad.html. Softcover, 96 pages, 101 photos and diagrams, $25.95 plus shipping.

The railroad is a popular hobby and locomotive parts for designing and building a [illegible] railroad. Whether you're a beginner or an experienced modeler, this book will help you create a realistic railroad. Whether you're a beginner or an experienced modeler, this book will help you create a realistic railroad.

### Featured Book

Dining and Beverage Service Cars of the Southern Railway System (1914-1968)
By John R. Hollister

Available from Sierra de Rutherford Historical & Modeling Society, 12345 S. Rte Dragon Hill, Oklahoma City, OK 73116-6802. To order, write to the address above or visit www.railroad.org. Hardcover, 350 pages, over 500 black-and-white and color illustrations, $60.00 plus $4.00 shipping in the U.S. and Canada.

For more than 50 years the railroads of the South, the Southern Railway and Gulf Railway were synonymous with passenger trains and hospitality of the finest quality, since the passenger railroads adopted the practice of the Native American cultures of the Americas. Southern's commitment to this tradition began in 1914 when the Southern Railway Dining Car Department was established. Southern's dining and beverage service operations ceased in 1968, but also established this unique partnership between Southern and Gulf Railway that began in 1914 with a Dining Department, expanded to Railway travel lovers after the turn of the 19th century, shows us [illegible] commitment to the hospitality tradition that began [illegible] of 1914.

Richly illustrated with hundreds of photos, period menus and advertisements, many in color, Dining and Beverage Service Cars of the Southern Railway System (1914-1968) is a [illegible] of the Southern Railway System (1914-1968) is a [illegible] of the Southern Railway System (1914-1968) is a [illegible]

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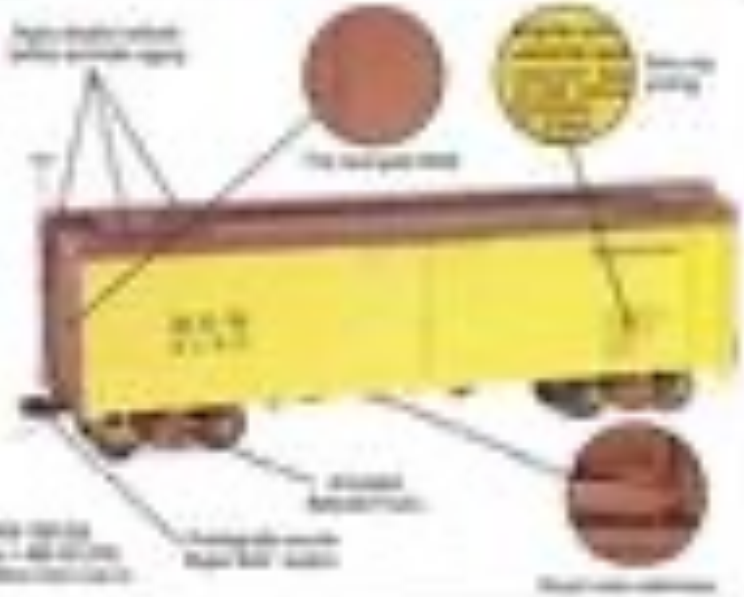

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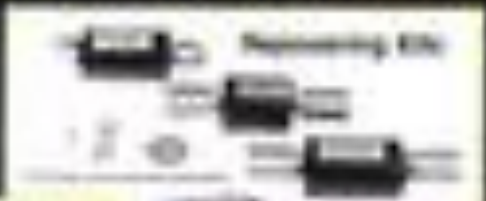

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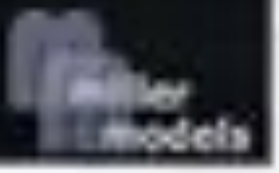

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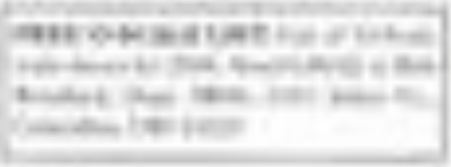

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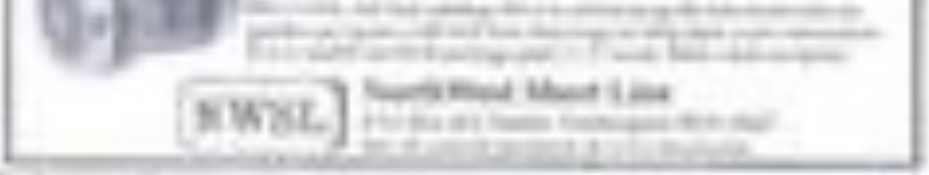

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# NMRA National Retailers Listing

# ADVERTISER INDEX




# NMRA Electronic Retailers Listing

# Timeframes

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The Mid-Coast Wave Railroad was primarily a logging line, but was also operated as a passenger carrier for a period of time. Located in the lush of Mount Shasta, the Mid-Coast had a great scenic for some years. Shown here is No. 1102, a Russell-type yard plow which still plowes it' snows on this Northern California short line.

With more than 20,000 images cataloged and more than 200,000 images readily accessible, the NMRA's Photo is one of the largest private photographic Civil Collections in the Railroad Historical Library on the continent. Used in the NMRA Bulletin, the most informative

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